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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,185	04/19/2004	Mike Musgrave	COS-889	2436
<div>7590 David J. Alexander Fina Technology, Inc. P.O. Box 674412 Houston, TX 77267-4412</div>			<div>EXAMINER LEE, RIP A</div>	
			<div>ART UNIT 1713</div>	<div>PAPER NUMBER</div>
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	01/12/2007	PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/827,185

Applicant(s)

MUSGRAVE ET AL.

Examiner

Rip A. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte* Quayle, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-9,11-18,20-24 and 26-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7-9,12,13,16-18,21-24 and 27-34 is/are rejected.
- 7) ☒ Claim(s) 6, 11, 14, 15, 20, 22 and 26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This office action follows a response filed on November 29, 2006. Claims 1, 3-9, 11-18, 20-24 and 26-34 are pending. The indicated allowability of claims has been withdrawn in view of a newly discovered reference, Suzuki *et al.* (JP 9-165482). Rejections based on this new reference follows.

#### *Claim Objections*

1. Claim 22 is objected to because of the following informalities: In line 2, please replace "comprising" with "comprises." Appropriate correction is required.

#### *Claim Rejections - 35 USC § 102 / 35 USC § 103*

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 31-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki *et al.* (JP 9-165482).

Suzuki *et al.* teaches a blend comprising 80-97 wt % of propylene-ethylene random copolymer having an ethylene content of 0.5-5 wt % and exhibiting MFR of 0.5 to 30 g/10 min, 20-30 wt % of hydrogenated diene copolymer, and 0.05-0.5 pw (500-5000 ppm) of dibenzylidene sorbitol nucleating agent (abstract). The hydrogenated diene copolymer adequately qualifies as "impact copolymer" as generically recited in the instant claims.<sup>†</sup> The compound *bis(p-ethyl)dibenzylidene sorbitol* is exemplary (paragraph [0016]). The blend is used to make transparent sheet *via* injection molding (paragraph [0019]).

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<sup>†</sup> These types of polymer are described as impact copolymer; see Shimokawa *et al.* (U.S. 4,314,041, Mori *et al.* (EP 574 054), and Ghidoni *et al.* (U.S. 5,304,597).

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4. Claims 1, 3-5, 7, 8, 12, 13, 21-23, 27-30 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Suzuki *et al.* (JP 9-165482).

The discussion of the disclosures of the prior art from the previous paragraph of this office action is incorporated here by reference. The reference is silent with respect to the physical properties of the blend. However, in light of the fact that Suzuki *et al.* teaches essentially the same process for making essentially the same blend, and in view of the fact that the blend is used to make transparent sheet, and further in light of the fact that Suzuki *et al.* teaches use of the same type of clarifying agent, one having ordinary skill in the art would have found it obvious that the blend exhibits essentially the same properties. Since the PTO can not conduct experiments, the burden of proof is shifted to the Applicants to establish an unobviousness difference. *In re Fitzgerald*, 619 F.2d. 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112-2112.02.

5. Claims 9, 18, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki *et al.* in view of Miyata *et al.* (U.S. 5,608,008).

Suzuki *et al.* instructs that propylene-ethylene random copolymers of the invention are conveniently prepared by stereospecific catalysts (paragraph [0008]), but it does not state the word "metallocene" specifically. One having ordinary skill in the art would have found it obvious that metallocenes are stereospecific catalysts to be used for making copolymers of the invention. Even if the skilled artisan were woefully uninformed, he would have turned to Miyata *et al.* which teaches that metallocene catalysts are used for preparing propylene-ethylene random copolymers having ethylene content as low as 0.5 wt % (col. 2, line 8). Therefore, it would have been obvious to one having ordinary skill in the art to use a metallocene catalyst to prepare the random copolymer of Suzuki *et al.* and thereby arrive at the subject matter of the instant claims.

6. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki *et al.* in view of Nakazima (U.S. 5,001,176).

Suzuki *et al.* is silent with respect to melt processing conditions. Nakazima teaches that similar propylene-ethylene random copolymers having low ethylene content (2.5-4 wt %) are conveniently extruded at 200 °C. Thus, one having ordinary skill in the art would have found it obvious to melt process the copolymer of Suzuki *et al.* at substantially the same temperature in order to ensure the polymer has sufficiently melted. Since this process is disclosed in the prior art to work, the skilled artisan would have expected the combined teaching work equally well.

7. Claims 6, 11, 14, 15, 20, and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The cited references do not teach or fairly suggest the impact copolymer of claim 6, and it does not make obvious the subject matter of claims 14 and 15. Claims 11, 20, and 26 are drawn to metallocene prepared impact copolymers. The examiner recognizes the product-by-process format of the claims, however, it is noted here that the “metallocene catalyzed impact copolymer” distinguishes said impact copolymer over that of the cited references.

***Prior Art***

The prior art made of record but not relied upon is considered pertinent to the Applicant's disclosure. The following references have been cited to show the state of the art with respect to compositions containing clarifying agents, notably, dibenzylidene sorbitol type compounds, and random copolymers containing ethylene in the range of 0.15 to 4 wt %. None of the references disclose a blend of random copolymer with "impact copolymer."

Dotson *et al.* (U.S. 2003/0236332)

Obata *et al.* (U.S. 6,812,287)<sup>†</sup>

Sezume *et al.* (U.S. 6,143,813)

McCullough (U.S. 6,022,946)

Mannion *et al.* (U.S. 5,961,914)

Fujii (U.S. 5,204,037)

Yokote *et al.* (U.S. 5,153,249)

Akao *et al.* (U.S. 5,106,665)

Nakazima (U.S. 5,001,176; *vide supra*)<sup>†</sup>

Metrick *et al.* (U.S. 5,486,792)

Weissberger *et al.* (U.S. 4,666,959)<sup>†</sup>

Hiranaka *et al.* (JP 9-194648)

JP 64-140

JP 54-4947

JP 54-69155

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<sup>†</sup> Random copolymers may be blended with polypropylene homopolymer and/or low density polyethylene. The latter two polymers were not considered to qualify as "impact copolymer."

The following references have been cited to show the state of the art with respect to impact copolymers. Each of these has been described in the text as “propylene impact copolymer” or “impact copolymer propylene,” or their heterophasic constitution has been described sufficiently in the specification. These types of impact copolymer are well-established in the art, the terms “propylene impact copolymer” or “impact copolymer propylene” are commonplace and well-accepted in the art, and the scope of patent protection sought by the terms “propylene impact copolymer” or “impact copolymer propylene” in these patents is readily understood by those having ordinary skill in the art. Clearly, these exclude diene-based elastomeric impact copolymers.

Meka *et al.* (U.S. 2005/0009991 and 6,399,707)

Miller *et al.* (U.S. 6,995,213)

Tau (U.S. 6,939,919 and 6,593,005)

Sheldon (U.S. 6,881,793)

Kim (U.S. 6,660,808)

Burkhardt *et al.* (U.S. 6,384,142 and 6,342,566)

Chatterjee *et al.* (U.S. 6,197,886 and 5,674,630)

Miro *et al.* (U.S. 6,111,039)

McCullough *et al.* (U.S. 6,015,854, 5,712,344, 5,362,782, 5,258,464, and 5,118,757)

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

A handwritten signature in black ink, appearing to read 'Rip A. Lee', with a stylized, cursive script.

December 21, 2006